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# Water, peace and security: transboundary water cooperation

## Note by the Secretariat*

*Summary*

The present note is submitted pursuant to General Assembly resolution 64/198, in which the Assembly, inter alia, invited the President of the General Assembly to convene a high-level interactive dialogue of the sixty-fourth session of the General Assembly in New York on 22 March 2010, World Water Day, on the implementation of the International Decade for Action, "Water for Life", 2005-2015. The note provides background information for Member States for the high-level interactive dialogue panel on the theme "Water, peace and security: transboundary water cooperation".

* The present note is based largely on the UN-Water thematic paper for 2008 entitled "Transboundary waters: sharing benefits, sharing responsibilities", available from http://www.unwater.org/downloads/UNW_TRANSBOUNDARY.pdf. The note was prepared by the Department of Economic and Social Affairs of the Secretariat, jointly with the Economic Commission for Europe and the United Nations Scientific and Cultural Organization, as the two coordinators of the Task Force on Transboundary Waters, of UN-Water, the inter-agency mechanism designated by the United Nations System Chief Executives Board for Coordination, through its High-level Committee on Programmes, as the coordinating mechanism in the United Nations system in the area of water and sanitation.

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# I. Introduction and background

1. For thousands of years, the amount of water on Earth has remained constant while the number and types of users of water have increased massively. Global dynamics — such as population growth, urbanization, land use changes, and global warming — are creating competing pressures on this finite resource. As a result, the amount of water available for each person is increasingly unequal and diminishing dramatically.

2. Geopolitical realities compound these trends. Rivers, lakes and aquifers do not respect national boundaries. Almost half of the Earth's land surface is drained by transboundary basins. Great reservoirs of freshwater also move silently below borders in underground aquifers.

3. Challenges related to transboundary waters[1] are expected to increase as a result of numerous pressures, such as climate change and population growth. Competition over water is even more acute in these zones of water stress, leading sometimes to serious tensions between different groups of users.

4. With every country seeking to satisfy its water needs from limited water resources, some foresee a future filled with conflict. Some have even raised the spectre of future "water wars", although conflicts over water within countries are more likely than between sovereign States.

5. It is important, however, to remember that water does not have to be a source of conflict and competition. If humanity is wise and just in the way it uses and shares its water resources, water can also be a catalyst for international cooperation and peace. History shows that cooperation, not conflict, is the most common response to transboundary water management issues.

6. Water should be seen as a multifaceted resource that provides opportunities for creating new benefits to be shared, for solving stakeholders' problems and for meeting their respective interests. When the management of shared water is handled with the right tools, namely, through cooperation, tolerance and mutual respect, it can pave a safe way towards sustainable and peaceful development from every angle: social, economic, political, cultural and ecological. Thus, the benefits that accrue from cooperation over water can and should go far beyond the management of the resource itself. Past experiences confirm that it is possible for parties with divergent interests to use a common resource harmoniously. What is important is learning how to manage shared resources equitably, in ways that guarantee good quality and adequate quantities of water for everyone. The present note indicates how transboundary cooperation should be designed to prevent conflict in the long term, despite the numerous pressure factors.

7. Over the last 60 years there have been more than 200 international water agreements. It is necessary to continue to nurture the opportunities for ensuring peace and security that transboundary water cooperation can provide. Nations share the responsibility for managing the world's transboundary waters for current and future generations.

[1] The term "transboundary water" in the present note refers to transboundary rivers, lakes, inland water as a whole and aquifers; here, it explicitly excludes open oceans, territorial seas and coastal waters.

8. The primary responsibility for transboundary water cooperation lies with Member States. However, the present note also shows how the United Nations system, through its coordination mechanism, UN-Water, has been collaborating to ensure coherence and complementarity in its policy and operational work in the service of Member States.

## II. Challenges and benefits of cooperation

9. Approximately 40 per cent of the world's population lives in river and lake basins that comprise two or more countries, and perhaps even more significantly, over 90 per cent lives in countries that share basins. The existing 263 transboundary[2] lake and river basins cover nearly one half of the Earth's land surface and account for an estimated 60 per cent of global freshwater flow. A total of 145 States include territory within such basins, and 30 countries lie entirely within them. In addition, about 2 billion people worldwide depend on groundwater, which includes approximately 300 transboundary aquifer systems.

10. Aquifers not only contain quality water and represent a substantial hidden global capital, but also support land and water ecosystems. Their overexploitation can lead to serious problems such as groundwater depletion, saltwater intrusion in coastal areas and mobilization of toxic substances such as arsenic and fluoride. Pollution can also affect aquifers, and thus the populations relying on them.

11. The transboundary basins and aquifers link populations of different countries and support the incomes and livelihoods of hundreds of millions of people worldwide. Wetlands such as lakes and floodplains, which are also often shared by neighbouring countries, provide invaluable ecosystem services to humans, such as food provision and reduction of flood impacts and pollution. All transboundary water bodies create hydrological, social and economic interdependencies between societies. They are vital for economic development, reducing poverty and contributing to the attainment of the Millennium Development Goals. While embedding a potential for discourse and conflict, they provide opportunities for cooperation and promotion of regional peace and security as well as economic growth. Recognizing this potential through various initiatives, the members of UN-Water are focusing on tipping the balance from potential conflict to cooperation, by supporting countries in their efforts to improve the management of transboundary water resources.

12. Depleted and degraded freshwater supplies, caused by population growth, poorly managed development and weak governance, hamper sustainable development and underscore the need for cooperation between the major water-use sectors: agriculture, industry, energy, navigation and water supply and sanitation. Individual countries, within their areas of political responsibility, have good reasons to implement integrated water resources management to protect and sustainably use water and related ecosystems and to reconcile the demands of different sectors for socio-economic development. Potential transboundary impacts and conflicting interests can best be solved by cooperation, adequate legal and institutional frameworks, joint approaches to planning and sharing of benefits and related costs.

[2] The terms "transnational", "trans-State" and "international" are also used.

13. Differences between riparian countries, in terms of socio-economic development, capacity to manage water resources, infrastructure, political orientation and institutional as well as legal contexts, represent challenges to effective and coordinated development as well as to the joint management and protection of transboundary water resources. At the same time, these differences open up opportunities for capacity development and technical, social, legal and economic cooperation.

14. Not surprisingly, cooperation over transboundary surface waters has a long history. Cooperation about transboundary aquifers, however, is much more recent. Steps, however, are being taken: the General Assembly has adopted articles on the law of transboundary aquifers, and inventories of transboundary aquifers have been performed for Europe, Latin America and the Caribbean, Africa and Eastern Asia by different United Nations institutions pursuing water-related activities. These inventories will help to further our understanding of the sustainable management of such aquifers and their relationship with surface water.

**Potential for cooperation and benefits for human security**

15. A growing number of States are experiencing rising or even permanent water stress, and climate change consequences will increase the numbers of countries experiencing high variability in water resources availability, including higher frequencies or intensities of floods and droughts. Competition over water can heighten tensions and even lead to open conflict. An assessment of past water-related conflicts shows that water scarcity, dam construction, water abstraction, and chronic and accidental water pollution by industry, as well as neglect or non-acceptance of existing treaty provisions, often lie at the root of water tensions. As growing populations, urbanization and economic development all require more water for agricultural, municipal and industrial uses, there are greater risks. This said, it is usually factors outside the water domain that are decisive in exacerbating tensions.

16. In fact, history has often shown that the vital nature of freshwater is a powerful incentive for cooperation, compelling stakeholders to reconcile even the most divergent views. Water more often unites than divides peoples and societies. Since 1948, history shows only 37 incidents of acute conflict over water, while during the same period, over 295 international water agreements were negotiated and signed. Clearly, averting disputes is often a strong political driver for initiating cooperation on transboundary waters since riparian States recognize that they must safeguard their greater common interests.

17. Climate change is expected to add to pressures on transboundary water resources in many areas with fluctuations in water availability and water quality. It will magnify regional differences in the world's natural resources and assets and lead to such effects as an increased risk of inland flash floods, more frequent coastal flooding and droughts. The necessity to adapt to climate change, however, will also offer new opportunities for cooperation in developing adaptation strategies. But cooperation in the development of adaptation strategies is currently almost non-existent. The Economic Commission for Europe (ECE) publication *Guidance on Water and Adaptation to Climate Change*, developed under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and its Protocol on Water and Health, describes how States can cooperate in the development of a basin-wide adaptation strategy.

18. Cooperation enables better ecological management, providing benefits to river, aquifer, lake, wetland and related ecosystems as well as adjacent estuaries, coastal areas and seas. It also underpins important further types of benefits, some of which are not readily apparent or properly taken advantage of. For example, efficient, cooperative management and development of shared waters and adjacent flood plains can yield increased food and energy production; improved irrigation can contribute to poverty reduction and help to control migration from rural areas to urban centres; and transboundary early warning systems can minimize loss of life in the event of floods. A third (political) benefit derives from the easing of tensions due to cooperation. Finally, as international waters can be catalytic agents, a fourth benefit is improved economic integration between States. Transboundary water management can thus directly or indirectly contribute to international trade, economic development, food security, political security, poverty alleviation and regional integration.

# III. Pillars for transboundary water cooperation

19. Achieving transboundary cooperation is always a long and complex journey; there is no single path and there are few short cuts. Instead, there are many routes that can be followed, and any arrangement must be tailored to a given basin's characteristics and reflect a range of environmental, hydrological, political, economic, social and cultural circumstances. Water resources policy must also be coordinated with other natural resources and sectoral policies, such as land-use management and spatial planning.

20. Political will and commitment from all Governments, at all levels, are prerequisites for successful transboundary water management. While there is no universal solution, the seven pillars set out below are usually considered as necessary for long-term, sustainable and reliable transboundary cooperation.

### Legal instruments

21. A sound legal framework is essential for stable and reliable cooperation. At the global level, the 1997 Convention on the Non-Navigational Uses of International Watercourses represents an important step forward. The Convention was adopted by the General Assembly and provides a legal framework for inter-State cooperation on international watercourses. Although it is not yet in force, the Convention's core principles, namely, the equitable and reasonable utilization and the no-harm rule, are already part of international customary law. In Europe, the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes has been the basis for adoption of many bilateral and multilateral agreements, most notably the 1994 Convention on Cooperation for the Protection and Sustainable Use of the Danube River. The regional success of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes has convinced its Parties to adopt an amendment to the Convention, opening it up for accession by all States Members of the United Nations. When this amendment comes into force, that Convention will increase its importance beyond the ECE region.

22. Recognition by the international community of the importance of bilateral, regional and multilateral legal frameworks has made possible the conclusion of a number of treaties, protocols and conventions on the use, development and

protection of transboundary watercourses and related ecosystems, such as the 1960 Indus Water Treaty; the 1978 Great Lakes Water Quality Agreement; the 1991 Pakistan Water Apportionment Accord; the 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin; the 1995 Protocol on Shared Watercourse Systems in the Southern African Development Community Region (revised and extended in 2000); the 1996 Mahakali and Ganges treaties; and the 2003 African Convention on the Conservation of Nature and Natural Resources. In addition, other multilateral environmental agreements, such as the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa and its subregional action programmes, the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) and the United Nations Convention on Biological Diversity, may not solely address water issues, but help provide an important support framework for cooperation.

23. An important step regarding transboundary aquifer management was the adoption by the General Assembly of resolution 63/124, to which the 19 draft articles on the law of transboundary aquifers, which had been elaborated by the International Law Commission, were annexed. In the resolution, the Assembly encouraged the States concerned to make appropriate bilateral or regional arrangements for the proper management of their transboundary aquifers, taking into account the provisions of the draft articles. The provisions include cooperation among States to prevent, reduce and control the pollution of shared aquifers. In view of the importance of these "invisible resources", States are invited to consider the draft articles as a basis for the elaboration of a convention. A number of initiatives are also already under way (e.g., the Nubian Sandstone Aquifer System and the North-Western Sahara Aquifer System) to develop legal frameworks for individual shared aquifers.

24. Similarly, the body of law pertaining to the transboundary aspects of flood management and drought proofing is steadily growing. Various legal instruments have been devised on a bilateral and multilateral basis for all aspects of flood preparedness, response and recovery, most recently in the European Union (EU) member States through the EU directive on the assessment and management of flood risks. Model provisions on transboundary flood management have been developed and agreed under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, and the World Meteorological Organization has elaborated a rapid legal assessment tool to assess the needs for legal reform to provide an institutional backbone for flood management in river basins.

25. Despite the proliferation of agreements on transboundary water management, there are still numerous watercourses, not to mention aquifers, without adequate legal frameworks for cooperation. Notably, more than 150 of the world's 263 international river basins, plus transboundary aquifer systems, lack any type of cooperative management framework.

26. Moreover, existing agreements are sometimes not sufficiently effective to promote integrated water resources management due to problems at the national and local levels, such as inadequate water management structures and a weak capacity in countries to implement the agreements as well as shortcomings in the agreements themselves (for example, an inadequate integration of aspects such as the

environment, the lack of enforcement mechanisms, limited sectoral scope and non-inclusion of important riparian States).

27. There is a consensus among the majority of riparian countries that transboundary agreements need to be concrete and to set out institutional arrangements for cooperation, and measures for the management and protection of water resources and related ecosystems, as well as for enforcement. Agreements must take into account water quantity and quality, hydrological events, changing basin dynamics and societal values as well as all potential impacts of climate change. They should also incorporate dispute resolution mechanisms and identify clear yet flexible means to share the benefits of water, water allocations and water-quality standards. Provisions for joint monitoring, information exchange and public participation as well as mutual assistance in case of extreme events are also crucial. Agreements should include ways to factor in risk and uncertainty, for example related to climate change. Finally, they should have provisions for encouraging water-related joint economic development activities, such as cost-sharing arrangements.

**Institutional structures and capacity development**

28. Appropriate institutional structures at the national, transboundary and regional levels are a precondition for the sustainable development and management of transboundary waters and for lasting cooperation among riparian States. A clear mandate for the different national and transboundary organizations is an important prerequisite for the formation of strong governing bodies.

29. Effective transboundary water management starts at the national level, where coordination and cooperation between different ministries and water-related institutions are needed, as are sufficient financing and political commitment. Some common obstacles are conflicting mandates, fragmented authority and the limited capacity of national institutions. The lack of strong political will to develop and implement the laws and agreements needed to effectively coordinate water uses within the various sectors and to manage resources in an integrated manner adds to the problem.

30. At the transboundary level, the formation of joint bodies with a strong enforcement capacity, such as river, lake and aquifer commissions, is fundamental to ensuring cooperation between the various governmental entities and to good management of shared resources. Enforcement can only be achieved if these bodies possess strong mandates and political support from the various Governments. Apart from States, a variety of actors, including local stakeholders, non-governmental organizations, research institutions, private sector participants and donors, must all be involved. Success can be found in the interaction and cooperation between the different levels and stakeholders. Vertical and horizontal integration is a necessity, and the joint bodies are the framework where such integration takes place.

31. To be effective, joint bodies should pursue the following:

- Coordination and advisory functions (e.g., collecting and exchanging hydrological data and forecasts; identifying pollution sources and hot spots; serving as a forum for the exchange of information on emerging issues, existing and planned uses of water and related installations; and conducting studies on climate change impacts)

- Policy development and implementation, including formulating joint policies, strategies and visions to implement the agreement (e.g., developing joint monitoring programmes; establishing warning and alarm procedures; setting up regimes for reservoirs and other facilities)
- Implementation and dispute settlement, including monitoring and reporting on implementation and settling differences and disputes

32. Joint bodies in the same basin with a different scope (e.g., navigation and water management, and bodies overseeing a first-order basin, main tributaries or aquifers) should develop institutional and administrative structures that facilitate cooperation. Similarly, cooperation between joint bodies with the same scope but in different areas, such as protection of inland waters and of the marine environment, makes the work of both bodies more effective.

33. Appropriate rules of procedure and terms of reference for river basin organizations that take into account specific local conditions are also crucial. These rules should not only recommend the structure, responsibilities, rights and financial status of such organizations, but also the ways and means to ensure public participation.

34. For joint bodies to be effective, their institutional and human capacities are crucial. Staffs of joint bodies should have a broad competence and skills that bridge disciplines. The capacities of managers, especially at the national and local levels, should be strengthened not only to raise an understanding of the complexities of managing shared water resources but also to derive the benefits made possible through cooperation. Negotiation, diplomacy and conflict resolution skills need to be developed and improved. The capacity to develop and implement policies and laws as well as the relevant enforcement mechanisms is vital, and should be developed accordingly; so, too, is setting up funding arrangements, both internal and external.

**Integrated approach**

35. Transboundary as well as national water development and management are strongly linked to sustainable and responsible growth. Thus, an integrated approach favouring long-term and contingency planning is needed, building resilience into vulnerable systems, with an emphasis on increased diversity and flexibility. New management approaches should be based on regional cooperation principles, focusing on river basins and aquifer systems. Integrated water resources management is a process that promotes coordinated and efficient development and management of water, land and related resources to maximize economic and social welfare without compromising the sustainability of vital ecosystems. This requires a coordinated approach, including by industry, agriculture and the water-supply infrastructure. It calls for a holistic management of surface and groundwater, implemented with the entire river basin in mind. Numerous challenges are involved, such as continuous changes in people's demands and values and structural transformations in society and the environment, not to mention climatic anomalies and other exogenous shifts. These various challenges call for multifaceted, flexible decision-making processes.

36. Many existing transboundary cooperation arrangements are highly sectoral; the majority address specific waterworks, water uses and measures to control and

regulate water flows, pollution or the environment. There is a need to revise these approaches in order to follow integrated water resources management principles. Sectoral entities should be actively used as the building blocks of an integrated approach, with the appropriate mechanisms and changes in legislation. Globally agreed targets and indicators for integrated water resources management plans are very important since such plans provide an opportunity to assess the current water situation in all its thematic and subsectoral dimensions, as well as quality and quantity aspects.[3]

**Exchange of information and joint monitoring and assessment**

37. Information based on well-organized measurement networks and monitoring programmes is a prerequisite for accurate assessments of water resources and problems. Assessment is essential for making informed decisions and formulating policy at the local, national and transboundary levels. Moreover, basin management by two or more countries calls for comparable information. A common basis for decision-making requires harmonized (if not standardized), compatible assessment methods and data management systems as well as uniform reporting procedures.

38. The exchange of information, including on pollution caused by accidents, on infrastructure projects that could affect downstream countries, on extreme events (floods and droughts) and on operations, such as for hydropower, navigation and irrigation, is vital to building trust and a shared vision among riparian countries. In this context, a number of key policies on the "free and unrestricted" exchange of hydrological data and products are being promoted by the World Meteorological Organization and the United Nations Educational, Scientific and Cultural Organization (UNESCO).[4]

39. Joint monitoring requires an agreed terminology, such as the one provided by the UNESCO/WMO International Glossary of Hydrology or the System of Environmental-Economic Accounting for Water developed by the United Nations Statistics Division of the Department of Economic and Social Affairs of the Secretariat and the Division for Sustainable Development. Such terminology translates an international standard vocabulary into regionally used languages.

**Participatory approach**

40. Public participation is fundamental to maximize agreement, enhance transparency and decision-making, create ownership and facilitate the acceptance and enforcement of decisions and policies. It is also a mechanism for gaining a better or common understanding between the various stakeholders on the nature of a given problem and the desirability of specific outcomes. Stakeholder participation strengthens integration, thereby contributing to conflict prevention, and risk reduction, which are all highly important in large infrastructure development projects.

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[3] UN-Water, "Status report on integrated water resources management and water efficiency plans", prepared in 2008 for the Committee on Sustainable Development, at its sixteenth session.

[4] See in particular resolution 25, on the exchange of hydrological data and products, agreed at the Thirteenth WMO Congress, and resolution XII-4, on the exchange of hydrological data and interaction, of the UNESCO International Hydrological Programme.

41. Numerous methods exist for public involvement ranging from the compilation of a stakeholders' database for network interaction to public hearings. Participation should be organized in an open and transparent way and should involve all relevant groups. Local residents, Government representatives, the research community, farmers, industries, the private sector, women and minority groups all need to be fully involved in the development of river basin, lake and aquifer strategies, agreements and institutions. Of course, numerous challenges to public participation exist as well, such as differing legislation and management and public participation systems, as well as priorities, in neighbouring countries. Frontiers frequently represent a "delimiter" not only of a linguistic but also of a cultural and socio-economic nature, and the public can be insufficiently aware of how to take part in decision-making. In addition, mechanisms of public participation are not well developed in many countries, and even less at the transboundary level. Critically, public participation requires adequate financial resources to be effective. Yet despite the difficulties, transboundary public participation efforts can be successful: witness the Convention on Cooperation for the Protection and Sustainable Use of the Danube River, the Sardar Sarovar Project and the Regional Partnership for Prevention of Transboundary Degradation of the Kura-Aras River.

**Benefits and cost-sharing**

42. Riparian countries should focus first on optimizing the generation of basin-wide benefits and, second, on sharing those benefits in a manner that is agreed as fair. The use of water, rather than the allocation of water itself, provides by far the best scope for identifying mutually beneficial cooperative actions. The perception by all countries that a cooperative basin development and management plan which maximizes overall benefits is "fair" is essential to motivating and sustaining cooperation. It is therefore important that consensus over basic entitlements is reached and that attention is paid to the differential distribution of costs resulting from the use of the water resources of the entire water body in question. It should be recognized, however, that due to the limited amount of overall available water in some cases, such decisions sometimes involve very difficult trade-offs and choices.

43. Payments for benefits or compensation for costs can be made in the context of cooperative arrangements. Countries can be compensated, for example, for the creation and operation of additional storage capacity by other riparian countries. This basin solidarity also might entitle upstream countries to share some portion of the downstream benefits that are generated, and thus share the costs of these practices. It is important, however, to apply a special approach to the benefits and costs that are not easily quantifiable or commensurable.

44. Payment for ecosystem services, such as for flood mitigation, regulating run-off and water supply, is a new and still contested approach. Nonetheless, if implemented well, the approach has the potential to be an environmentally effective, economically efficient and socially equitable tool for integrated water resources management, which can internalize environmental costs, broaden sources of finance and create incentives for environmentally friendly investments and behaviour.

**Financing**

45. Effective development and management of transboundary water resources, more and more widely understood as an international and common public good,

requires appropriate financing. The costs of developing a legal framework, establishing institutions, developing capacity, creating monitoring, data-sharing and assessment systems and — most costly of all — long-term investment programmes that optimize equitable use and protection of the shared water body need to be sustainable. The level of necessary financing varies broadly from one transboundary water resource to another, depending not only on available national budgetary resources but chiefly on the existence and strength of the specific joint body.

46. A mixture of financing mechanisms and various sources of financial resources is typically used for transboundary water management cooperation: from national budgets and external bilateral or multilateral donor-funded projects to more strategic programmes and funds or private-public partnerships (e.g., Mekong River Basin Development and Management). Investment needs in most cases exceed the resources available to riparian countries; therefore, various financing mechanisms are being developed and employed. International development banks or specialized development funds are successfully testing a number of innovative approaches such as strategic partnerships comprising regional funds, leveraging significant additional investment through these funds. Other innovative financing schemes, including regional revolving funds, payment for ecosystem services, inter-riparian financing and cost recovery of water services, could be considered as options for sustainable financing of transboundary water management institutions. However, these require strong political support, good governance and appropriate institutional structures.

# IV. Contributions of the United Nations system to transboundary water cooperation

### UN-Water and its activities

47. UN-Water is the United Nations inter-agency mechanism for all its agencies, departments and programmes involved in water-related issues. It is responsible for follow-up to the water- and sanitation-related internationally agreed development goals and supports Member States in their efforts to achieve national water- and sanitation-related goals and targets.

48. UN-Water acts at the global, national and regional levels, creating added value to the work and expertise of separate United Nations agencies and programmes. By helping to bring coherence and integration, UN-Water serves as the common voice of the United Nations system on water and sanitation. It improves cooperation with external partners and provides timely information on the status and trends of the world's freshwater resources. UN-Water has grown out of many years of extensive collaboration and partnership among the United Nations agencies. These efforts have contributed to the achievement of significant progress to date and have helped to bring water and water-related issues to the top of the political agenda.

49. Transboundary water issues have been identified by UN-Water as among the priority areas requiring joint action. Which solutions States will find in their competition over shared water resources and how transboundary surface and groundwaters are managed will impact upon the successful achievement of many of the Millennium Development Goals and the Plan of Implementation of the World Summit on Sustainable Development. A prime objective of UN-Water in this area is to provide coherent and comprehensive information, policy advice and technical

support to countries and stakeholders so that they can better manage transboundary waters. Coordination under the aegis of UN-Water can ensure an overall unity of complementary actions and thus supply a coherent framework for the many programmes of the Organization's water-related agencies and their partners. World Water Day in 2009, with a thematic focus on transboundary water cooperation, is one such example of this common United Nations system-wide effort. The official website of UN-Water for transboundary water issues, with links to member agency sites, is: http://www.unwater.org/TFtrans.html.

50. In the area of transboundary water cooperation, efforts by UN-Water members and partners to improve coordination and share experiences enhance the overall effectiveness of their activities and thereby the services they provide to Member States.

51. The UN-Water Decade Programme on Advocacy and Communication contributes to meeting the goals of the Decade. It is responsible for communication and advocacy, bringing United Nations agencies together to develop advocacy campaigns aimed at accelerating the implementation of policy actions and measures. The office is based in Zaragoza, Spain, and is hosted by the Department of Economic and Social Affairs.

52. The UN-Water Decade Programme on Capacity Development is a coordination and capacity development programme hosted by the United Nations University. Its mission is to enhance the coherence and effectiveness of UN-Water by strengthening its capacity development programmes. The Programme pursues two main activities concerning transboundary waters. It will create a single-point-of-access database to transboundary water-related capacity development activities, accessible to all UN-Water members, partners and other important water management stakeholders. An expert workshop was organized in 2008, with an emphasis on "successful cases" — the practical achievements of institutions with respect to developing feasible institutional structures, in tackling the challenges involved in managing transboundary waters and in developing the capacity required to do so. The main outcome will be a detailed compendium and analysis of successful institutional arrangements.

**Activities of entities of the United Nations system**

53. While it is beyond the scope of the present note to provide a description of the transboundary water cooperation activities of the various agencies of the United Nations system, it is useful for policymakers to bear in mind the active role of the agencies in providing technical cooperation and normative advice to transboundary institutions and Member States sharing water bodies. Such assistance includes development law services to help member countries establish a legal and institutional environment conducive to stable and mutually beneficial transboundary water cooperation. Other types of cooperation strengthen the ability of the Governments of river basins to take informed decisions with regard to the management of their water resources. This objective is being achieved through the development of information products that integrate technical water resources and water use data with agricultural, demographic, socio-economic and environmental data.

54. The United Nations also assists Member States by supporting governance reform processes in over 35 shared water bodies to establish priorities, adopt policy

legal and institutional reforms in sectors facing degradation or conflicts, and test the feasibility of various investments to address conflicts and reverse degradation. More than 150 countries currently benefit from the technical assistance and transboundary water cooperation provided by the United Nations system.

**Inter-agency coordination on transboundary waters**

55. Recognizing the importance of transboundary water management, UN-Water created a Task Force on Transboundary Waters in 2008, coordinated by UNESCO and ECE, which was subsequently transformed into a continuing long-term Thematic Priority Area of UN-Water in February 2010.

56. The Thematic Priority Area on Transboundary Waters seeks to provide a platform to promote coherence and coordination of activities by UN-Water members and partners in the area of transboundary waters by facilitating a continuous exchange of information, experiences and lessons learned and by promoting joint efforts. The Task Force aims to act as a clearing house for good practices for transboundary water cooperation and to provide a single entry point to the initiatives of UN-Water members.

57. Since its creation in 2008, the Thematic Priority Area has worked to promote coherence and coordination of member activities in the field of transboundary water management and to raise the political profile of transboundary water management. Achievements in the 2008-2009 workplan include the production and printing of a policy brief, the coordination and preparation of activities for World Water Day 2009, focusing on transboundary water cooperation, and involvement in the World Water Week held in 2008 and 2009. In October 2009, an in-depth mapping exercise was undertaken in order to better understand the activities of UN-Water members and partners in this area. This will be an important basis for further improving cooperation, coordination and coherence and for eventually facilitating the access of Governments to the various services that United Nations agencies and partners provide.

58. The Thematic Priority Area also contributes to the global policy debate on water-related issues through active participation in global policy forums and events, such as the World Water Week 2009 or the World Water Day 2009.

59. The Thematic Priority Area therefore aims to ensure that transboundary waters are high on the political agenda, for example, through the upcoming high-level dialogue of the General Assembly. The Thematic Priority Area plans to pursue this aim through the production and dissemination of products such as fact sheets illustrating best practices, challenges and possible solutions for cooperation on transboundary waters, as well as briefs highlighting key issues of the United Nations system regarding transboundary waters. These will be launched at such international events as the sixth World Water Forum, to be held in 2012.

60. The Thematic Priority Area currently engages with the following UN-Water members and partners:

- Convention on Biological Diversity
- Food and Agricultural Organization of the United Nations
- Global Environment Facility

- International Atomic Energy Agency
- Ramsar Convention
- Stockholm International Water Institute
- United Nations Convention to Combat Desertification
- United Nations Development Programme
- Economic and Social Commission for Asia and the Pacific
- Economic Commission for Africa
- Economic Commission for Europe
- United Nations Educational Scientific and Cultural Organization
- United Nations Environment Programme
- The UN-Water Decade Programme on Advocacy and Communication
- Advisory Board on Water and Sanitation
- United Nations University
- UN-Water Decade Programme on Capacity Development
- World Health Organization
- World Meteorological Organization
- Worldwide Fund for Nature

# V. Conclusions and recommendations

61. **Transboundary waters connect populations of different countries. They constitute an important resource for millions of people and create security, environment, political and socio-economic interdependencies. Transboundary river basins cover more than 40 per cent of the land surface on Earth. The reasonable and equitable use of transboundary waters is therefore a major challenge for peace and security worldwide, and inter-State distribution of water presents a particular challenge to countries with arid or semi-arid climates. In the past, cooperation on shared waters clearly prevailed over conflict; however, in order to keep this balance in a future world characterized by climate change impacts, population growth and increased economic development, the recommendations set out below should be implemented.**

62. **Countries that have not yet done so should ratify the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses, and those located in the ECE region should also ratify the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and its amendments, opening up the Convention to all States Member of the United Nations.**

63. **Where not yet existing, agreements comprising all riparian countries should be concluded on transboundary surface waters and groundwaters, including a permanent institutional structure for cooperation, provisions on**

**water quality and quantity as appropriate, the exchange of data and public participation.**

64. **As a precondition for effective transboundary water cooperation, water management needs to be improved at the national level, following the principles of integrated water resources management and overcoming common obstacles such as conflicting mandates, fragmented authority and the limited capacities of national institutions. In this regard, further capacity-building is necessary.**

65. **Countries should pursue an integrated approach to water management, building resilience in vulnerable systems, overcoming the currently often sectoral approaches. This implies coordinating land and water policies, industry, agriculture, forestry, water supply infrastructure, navigation and other water-related sectors.**

66. **The exchange of data and joint or at least harmonized monitoring and assessment among all riparian countries represent the basis and a possible starting point for effective transboundary water management.**

67. **Public participation in transboundary water management should be promoted in order to enhance transparency, create ownership and facilitate the acceptance and enforcement of decisions and policies.**

68. **Increased financing from a variety of public and private sources needs to be made available to create and maintain the physical and institutional structures needed for effective transboundary water management.**

69. **When engaging in transboundary water cooperation, countries should focus on optimizing the generation of basin-wide benefits and on sharing these benefits (as well as costs, eventually) in a manner that is agreed as fair by all riparian countries.**

70. **Little attention has been paid to transboundary cooperation during the International Decade for Action "Water for Life", 2005-2015, so far. The recommendations set out below may help to raise the level of attention given to this important issue in the future.**

71. **Since financial contributions and commitments to advance the goals of the Decade have been limited so far, fund-raising appeals will be needed for the second half of the Decade, aimed at all stakeholders, such as Governments, non-governmental organizations and private foundations.**

72. **Member States may wish to consider setting up national mechanisms or designating focal points in their respective countries to facilitate and promote the transboundary aspects of the Decade.**

73. **Special focus needs to be placed on Africa's water development and management, including transboundary water cooperation, if the goals of the Decade are to be achieved in that region.**

74. **Member States, national and international organizations, major groups and the private sector are urged to make voluntary contributions in accordance with the guidelines for international years and anniversaries, including for activities related to transboundary water cooperation.**

75. **Interested stakeholders, such as international and regional organizations and non-governmental groups, are encouraged to link their water-related activities to the Decade and may wish to consider new partnerships related to transboundary waters.**

76. **Links with related initiatives undertaken by all stakeholders as well as major international events planned on transboundary water cooperation during the second half of the Decade should be strongly encouraged so that the Decade will involve all stakeholders in and outside of the United Nations system.**